

## CLAIMS

What is claimed is:

- 5 1. A blood pressure sensor apparatus for periodically measuring a blood pressure in a blood vessel, the blood pressure sensor apparatus comprising:
- an implanted sensor having a capacitor electrically connected to an implant inductor, the implanted sensor being adapted to be positioned adjacent the blood vessel such that the capacitor is operatively influenced by the blood pressure in the blood vessel;
- 10 an external reader having an external inductor adapted to be inductively coupled to the implant inductor; and
- a means for determining the blood pressure at the capacitor using the implant inductor and the external inductor.

2. The blood pressure sensor apparatus of claim 1 wherein the means for determining the blood pressure includes sweeping the external inductor through a range of frequencies and measuring a dip at a specific frequency, the specific frequency being determined by the capacitance of the capacitor, which in turn is determined by the blood pressure exerted against the capacitor.

3. An implanted sensor for measuring pressure in a conduit through a wall, the implanted sensor comprising:

a main body having an implant inductor; and

a probe with a capacitor electronically connected to the implant inductor, the probe

5 being adapted to fit through the wall so that the capacitor can sense pressure in the conduit.

4. The implanted sensor of claim 3 wherein the probe includes a neck portion that extends outwardly to a head portion.
5. The implanted sensor of claim 4 wherein the head portion includes a terminus that forms an aperture that is covered with a flexible membrane that defines an internal chamber.
6. The implanted sensor of claim 5 wherein the capacitor is operatively positioned adjacent the internal chamber.
7. The implanted sensor of claim 6 wherein the internal chamber is filled with a biocompatible fluid.

8. A method for measuring blood pressure, the method comprising the steps of:

- a) providing an implanted sensor having a capacitor electrically connected to an implant inductor;
- b) providing an external reader having an external inductor
- 5 c) positioning the implanted sensor adjacent the blood vessel such that the capacitor is operatively influenced by the blood pressure in the blood vessel;
- d) inductively coupling the external reader with the implant inductor;
- e) determining the blood pressure at the capacitor using the implant inductor and the external inductor.

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9. The method of Claim 8 wherein the blood pressure is determined by sweeping the external inductor through a range of frequencies and measuring a dip at a specific frequency, the specific frequency being determined by the capacitance of the capacitor, which in turn is determined by the blood pressure exerted against the capacitor.

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